

SECTION IV.—RIVERS AND FLOODS.

RIVERS AND FLOODS DURING JULY, 1918.

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[Dated: River and Flood Division, Weather Bureau, Aug. 24, 1918.]

Excepting the annual rise in the Columbia River, a flood stage was reached during July, 1918, at only one station, Brunswick, Mo., on the Grand River, and this was caused by backwater from the Missouri River; no damage was done.

THE ANNUAL RISE IN THE COLUMBIA RIVER.

The annual rise in the Columbia River began about one month later than usual and continued only about half the average length of time. The beginning of the flood at Portland, Oreg., June 12, was 4 days later in the season than flood stage has been reached previously during the 38 years of record. Only moderate flood stages were reached.

Warnings were issued in ample time to enable endangered property to be guarded against loss. Estimated loss along the rivers is as follows: Buildings, including factories, bridges, etc., \$4,000; crops, \$400; live stock, \$8,000; suspension of business, \$1,500.

TABLE 1.—Flood stages in the Mississippi River drainage during July, 1918.

River and station.	Flood stage.	Above flood stages—dates.		Crest.	
		From—	To—	Stage.	Date.
<i>Missouri:</i>	<i>Feet.</i>			<i>Feet.</i>	
Blair, Nebr.....	16			14.9	1-2
<i>Grand:</i>					
Brunswick, Mo.....	10	1	4	10.2	2
<i>Illinois:</i>					
Beardstown, Ill.....	12			11.8	13-14

TABLE 2.—Annual rise in the Columbia River, 1918.

River and station.	Flood stage.	Above flood stages—dates.		Crest.	
		From—	To—	Stage.	Date.
<i>Columbia River:</i>	<i>Fect.</i>			<i>Fect.</i>	
Marcus, Wash.....	24	*12	*23	31.2	*25-27
Wenatchee, Wash.....	40	*23	*27	40.5	*24-26
Vancouver, Wash.....	15	*12	†8	20.1	*26
<i>Kootenai River:</i>					
Bonniers Ferry, Idaho.....	26	*15	*17	26.6	*16
<i>Pen d'Oreille River:</i>					
Newport, Wash.....	16	*18	*28	17.0	*15-18
<i>Willamette River:</i>					
Portland, Oreg.....	15	*12	†7	19.2	*25-27

*June.

†July.

MEAN LAKE LEVELS DURING JULY, 1918.

By UNITED STATES LAKE SURVEY.

[Dated: Detroit, Mich., Aug. 5, 1918.]

The following data are reported in the "Notice to Mariners" of the above date:

Data.	Lakes.*			
	Superior.	Michigan and Huron.	Erie.	Ontario.
Mean level during July, 1918:	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
Above mean sea level at New York.....	602.26	581.92	572.58	246.85
Above or below—				
Mean stage of June, 1918.....	+0.16	—0.05	+0.05	—0.16
Mean stage of July, 1917.....	—0.34	±0.00	—1.27	—0.61
Average stage for July, last 10 years..	—0.20	—1.05	—0.27	—0.09
Highest recorded July stage.....	—1.58	—1.66	—1.83	—1.87
Lowest recorded July stage.....	+0.78	+2.02	+1.12	+2.26
Average relation of the July level to—				
June level.....	+0.2	+0.1	—0.1	—0.1
August level.....	—0.2	±0.0	+0.2	+0.3

*Lake St. Clair's level: In July, 575.98 feet.